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ABSTRACT

In a series of three workshops in 1981, a group of experienced home study educators, education technologists, and informed people from state and federal government, private industry, and trade associations tackled the questions, "What lies ahead in home study, for 'distant education,' in the next 20 years? How should educators plan for the future?" From these discussions a number of predictions, including the following, were made: (1) Distant education (D/E) enrollment will be part of a more complex living-learning-working-recreating social pattern, with mid-career changes accepted, people living longer, and recruitment to D/E being either through leisure time minicourses or through convincing people that D/E can help them better themselves financially or otherwise. (2) Print correspondence text materials will be the key component in the D/E education package of 2001, but educators will make use of radio, telephone, and audiovisual devices in conjunction with the printed materials. (3) D/E students will continue to want contact with instructors on a regular basis; D/E educators will admit that not all students can be served by this method, but it will become increasingly popular as the cost of attending resident schools climbs. (4) Professionals will be able to earn credentials in their fields via D/E. (5) Providers of D/E will make materials and services available wholesale to companies, professional organizations, and schools, and employers will play a greater role in financing D/E activities for their employees. (The major part of the report consists of more than 40 brief essays on the future.) (KC)

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THE GREEN CHAIR GROUP

Predicting Distant Education in the Year 2001

Final Report

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
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Office of the Executive Director

Dear Colleague:

Here is the report of the National Home Study Council's Green Chair Group. This select group of educators has developed a unique glimpse into the future of "distant education," or education outside the classroom.

The group's members worked on a voluntary basis at their own expense. Each devoted dozens of hours of time to the project. We are deeply indebted to them for their service and to NHSC's Michael Lambert who conceived the idea for the project and provided valuable guidance to the group.

We hope you will find the report interesting and beneficial. When we open the NHSC time capsule containing the report at the Council's 75th Annual Conference in 2001, hopefully those of us who are still around can toast the perception and acumen of the Green Chair Group.

Cordially,

William A. Fowler
Executive Director

sw
Enclosure

Distant Education in 2001

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I. What is the Green Chair Group?

The future of education outside the resident class setting is exciting. The National Home Study Council, a nationally recognized, non-profit association of correspondence study educators based in Washington, D.C., convened a group of experienced home study educators, education technologists, and informed people from state and federal government, private industry, and trade associations to tackle a question facing all independent study/correspondence school administrators:

> *What lies ahead in home study, for "distant education," in the next 20 years? How should educators plan for the future?*

Some twenty-five people (see list of members in Part VI) met three times in 1981 to explore and develop a picture of distant/home based study in 2001.

The Group, named for the color of the Conference room chairs at the NHSC's Washington offices, also did a considerable amount of independent thinking, research, and writing. A collection of their essays are included with this report. These essays, or "mini briefs," expand on the predictions of the group.

The purpose of the project was to develop a prediction -- a descriptive one -- based on the best available thinking of knowledgeable people, of what non-classroom, distant education should look like in the next 20 years.

The Group did not limit itself to describing and predicting traditional correspondence study techniques. Its work included any form of education or training which takes place outside of the resident classroom setting. Hence, the term distant education was used.

II. The Project's Intended Outcomes

The intented outcomes of the work of the Green Chair Group included:

1. Educators will be stimulated to think about and start planning for the future now.
2. A number of interesting magazine articles can be prepared.
3. Individual institutions can begin implementing some of the ideas now.
4. Education workshops can result from the project.
5. Various institutions can cooperate in developing mutually usable technology/media.
6. A time capsule containing the final predictions can be buried. It will be opened at the NHSC Annual Conference in 2001.

III. The Activities and Methods of the Group

The group convened at the NHSC Annual Conference on April 14, 1981. Follow-up meetings were held at the NHSC offices in Washington, D.C. on May 28, 1981, and September 29, 1981.

The group began by dividing the topic into five broad categories:

1. Demographics -- Who will enroll in non-classroom courses? Why will they enroll?

2. Enrollment -- How will students enroll? What recruitment techniques will exist? What will marketing/promotional systems be like?

3. Educational Materials -- What components will make up the education product? What format? What is the process used to develop courses? What media/hardware will be in common use? What training aids/kits will be used?

4. Service -- How will courses be delivered/transmitted? What evaluation schemes (to evaluate student mastery) will be employed? How will students access instructors? How will support services be delivered? What technology will we see in common use?

5. Applications -- What subjects will be taught -- and by whom? How will credentials be used? Academic degrees? Continuing education? Skill training? How will distance education interface with other educational providers, employers, and the lifestyle of the 21st century adult?

Each group member was assigned to a working sub-group for each of the five categories.

At its May meeting, the group fleshed out a variety of ideas of each category using a brainstorming technique.

Each group member conducted independent research at home and mailed three "mini briefs" -- or essays on particular aspects of the future -- to the NHSC.

The group reconvened in Washington in September and discussed the mini-briefs and refined the ideas presented. They also developed an initial ballot.

Voting on the final prediction was conducted by mail ballots: two ballots were held. After receiving a first ballot on the final predictions, a second one was prepared. The prediction in this report is the result of the final, second mail ballot (see Part VII for ballot forms).

IV. The Final Prediction: Distant Education in 2001

Below are the results of the second (and final) ballot of the members of the Green Chair Group.

D/E = Distant Education

Enrollment Techniques & Demographic Profiles

D/E enrollment will be part of a more complex living-learning-working-recreating social pattern.

The adult population (ages 18 to 70 yrs.) will be the prime source for D/E enrollments.

Mid-life career changes will be accepted as a social norm.

Medical science will further extend life expectancy; there will be a greater proportion of older people in our society who are candidates for D/E.

D/E "mini-lessons" related to leisure activities, e.g., sports, arts, etc. will be popular and reach a large market.

The largest proportion of the D/E student population will consist of those people who can be convinced (sold the idea) that they have the potential to better themselves through the means of D/E -- financially or otherwise.

Educational Materials & Student Access

Home study educators will "rediscover" the media of radio and telephone conference calls as means for direct interaction with students.

Educational materials will be designed to be marketed wholesale, as well as retail.

Courses will be structured to include cognitive and attitudinal learning objectives.

Greater emphasis will be given to the testing and validation of educational materials before they are marketed.

The design and development of D/E courses will be the cooperative effort of several kinds of specialists.

D/E materials will be produced by "course development teams" comprised of academicians, technical writers, and production specialists.

Printed correspondence course text materials will be the key component in the D/E education package of 2001.

Printed materials and lessons assignments will remain an integral part of D/E courses.

Audio-visual devices will be sent to D/E students to be used in conjunction with printed course materials.

Educational Services

Educational services in D/E will continue to mean service to or in support of the educational process.

Adult students will want to interact with advisors, counselors or instructors on a "real time" (now, when they call) basis.

Communications will be the vital link between the student and the instructor.

D/E will be important as a co-delivery system to traditional, resident systems.

Educational services will be tailored for either individual students or organizations sponsoring D/E programs for their employees or members.

The staunchest advocates of D/E will admit that the method is not appropriate for all students.

As the costs of attending resident schools climb higher because of inflation, many will choose D/E as a less expensive alternative.

Applications of Distant Education in 2001

Professionals will be able to earn credentials in their fields via D/E.

Providers of D/E will provide materials and services wholesale to companies, professional organizations, and schools.

Providers of D/E will be accountable to consumers by providing information on the outcomes of their educational services.

Employers will play a greater role in financing D/E activities for their employees.

V. Mini-Briefs by Green Chair Members

Following are unedited manuscripts of the essays submitted by members of the Green Chair Group.

Each essay was limited to about 300 words, and each writer contributed three essays on various aspects of distant education.

These essays expand on selected ideas about distant education, and aim to stimulate further discussion and action.

MINI BRIEF

of

MICHAEL P. LAMBERT

Mr. Lambert is the Assistant Director of the National Home Study Council. He joined the NHSC staff in 1972. He has 13 years of experience in correspondence education and has developed numerous home study courses.

* **"Distant Education in 2001: Some General Thoughts"**

Mini-Brief
of
Michael P. Lambert

DISTANT EDUCATION IN 2001: SOME GENERAL THOUGHTS

The Green Chair Group generated a lot of new, stimulating ideas about the future, ideas that were the result of some serious thinking on the part of educators committed to their profession.

While the final prediction reflects a rather conservative, "safe", and perhaps pragmatic look into the crystal ball, the group explored a number of novel ideas, from three deminisional projections of images in the family living room to learning during sleep.

Some of these novel ideas show up in Ballot Number 1 . . . but they didn't make the final ballot. Pity.

Here is a random collection of some of the general trends discussed by the group at their three meetings. They provide a backdrop to the "Mini-Briefs" which follow.

It will be exciting, I think, to look at these predictions at the NHSC Annual Conference in 2001 to see how accurate the Green Chair Group was.

Distant Education in 2001: General

In general, the Group believed the following trends and ideas will prevail in the year 2001:

1. Distant study will be a critical, important part of the total educational system.

2. The burden of financing education will shift from the federal to the state governments. The states in turn will seek cost effective alternatives to meet expanding educational missions.

3. The high growth potential and most novel aspect of distant education will be in communications and delivery methods (schools to students and students to schools). The "hot" area will be video communications in the home setting.

4. The technology for 2001 is (for the most part) already developed:

   - video tape, video discs, cable TV, satellites, home computer interactive systems, etc. They are here but are not yet in widespread use in homes. Clearly, video technology will be entrenched by 2001.

5. This technology must be "popularized;" the equipment must be in use in most homes in order for distant education to flourish.

6. There is a real need for the software and the educational programs to be brought "up to speed" with the hardware and gadgetry of today.

7. Industry itself will make increased use of the technology to train their employees using distant education techniques. The questions facing education will be: "Who will be supplying instruction? Will the concept of 'school' survive the century?"

8. Traditional, campus-based educational institutions will always be there to meet specific needs. However, traditional education is facing: energy costs, inflation, deteriorating physical plants, dwindling enrollments, and unrealistic student tuition levels. Survival for many schools will depend (in part) on breaking up the "campus-setting mindset" of administrators.

9. The economics of distant education will be critical in determining format and delivery of education in 2001. The costs of development will dictate what mainstream Distant Education will be in 20 years.

10. The printed word will most assurdedly be with us in 2001. It will be coupled with new hardware (e.g., hard copy text produced by printers from electronic printers). We cannot say "Goodbye Gutenburg" for a long time to come!

11. Time and place of study will be dominant market factors. People will be learning at times of their choosing, in places most convenient to them. Suppliers of education meeting these needs will have the edge over fixed location/fixed time suppliers.

12. The trend toward combinations of distant study and short term residence seminars will continue; seminars may well be "electronic," not requiring physical presence by participants.

13. The target audiance will transcend today's age categories: learning in 2001 will be lifelong. The largest target groups will be (in descending order):

    - mid-career working adults
    - professionals in need of updating job
    - second career-bound retirees
    - active adults (25-40) pursuing leisure topics

MINI BRIEFS

of

GERALD O. ALLEN

Dr. Allen has over 30 years experience as a correspondence educator. He was President of the Cleveland Institute of Electronics for 21 years until 1981, and now serves as CIE's Chairman Emeritus. He is a past President of NHSC and a former member of the Accrediting Commission.

* "Distant Education -- What Is It?"

* "Distance Learning in the Year 2001 . . . Who will do the Learning and How will they Enroll?"

* "De-mographics -- 2001"

Gerald O. Allen

Distant Education - What Is It?

Because of the preconceptions and lack of a definitive process, the Green Chair Group has, like the proverbial sheep, herded itself into a situation that is not responsive to challenge - real or perceived. How did this happen...should it have happened...and where do we go from here?

When the Group first met in April, 1981, in San Antonio, we were described as "A Task Force on Home Based Learning In the Year 2000". At that time the discussions were expanded by the leader to "distance education". (By the way, the current use of the term "distant education" is both negative and not consistent with the more appropriate "distance education" as used in ICCE materials). In May, the Group completely abandoned the concept of home-based learning despite efforts by several members to concentrate on the original thesis.

Several persons advanced the Open University (Great Britain) experiment as a "model" for the group. Not only is that program not home based, it integrates into the process several media that are incompatible with complete flexibility of learning at a time and place selected by the student. Any medium that utilizes a fixed broadcast schedule or requires equipment that is both economically feasible and easily portable, is not flexible in time or place. If we want to explore the Open University philosophy, well and good. If we want, as I assume, to forecast the development of truly independent learning (correspondence, home study, etc.), then the realities of the situation will direct the Group in another and quite different direction.

There can be no doubt about the impact of electronics on educational processes. Computer assisted instruction, multi-channel TV via satellites, tape and wire recorders (aural and video), low-cost telephone links, etc. have already become a reality...and more will come. But, what devices will be available by 2001 that meet the test of:

1. Economics
2. Portability
3. Educational (as opposed to gimmick) effectiveness
4. Time choice (freedom from schedule)?

Correspondence learning, regardless of the criticism of many traditional educators, is an effective and highly cost-efficient educational medium. Call it by another name if you will, but don't change the basic concept...complete flexibility of learning when and where the student elects and at a price consistent with reality.

Distance Learning in the Year 2001...
Who will do the learning and how will they enroll

The growth of non-traditional education during the past two decades will escalate rapidly up to and long past the year 2001. While some of the growth will reflect a lack of confidence in the lockstep of the traditional classroom format, the real spur will be the demands of the marketplace for lifelong learning. Since full-time employment, family and geographical considerations and the desire for self-paced learning are usually incompatible with the fixed schedules of resident instruction, the logical solution will be, for most persons, a truly independent learning process.

It is quite conceivable that for every person enrolled in an independent learning program in 1981, there will be ten such persons in 2001. Two employed parents will be a family norm. Not only will one or both parents need original career training, the demands of most careers will require continuing training for most of the persons' working years. Equally important will be the need for cross-training and vertical upgrading. This would, of course, include the need for degrees at all levels - credentials as well as the inherent increase in knowledge.

The recruitment of students will be accomplished through the use of 1981 media, but probably with some shift in emphasis. Today most schools reach new students by an active program of advertising to make prospective students aware of various career opportunities and how non-traditional instruction can effectively provide the skills needed for (1)new careers and/or (2) upgrading in existing careers. While the approach will continue in the area of recruiting for new careers, continuing education for established careers will become a joint responsibility of both employers and employees. Thus, instead of relying solely on the school to initiate the recruiting process, the employees and the ultimate consumer (employers), will increasingly seek out qualified schools.

To the extent that all areas of communication will be greatly affected by both direct (telephone, television,etc.) and indirect (tapes, video discs, etc.) electronic devices, the basic recruitment process will change during the next 20 years. However, it is not realistic to predict a revolution in this area. There have been no fundamental changes in student recruiting for over 50 years. Except for the greatly increased activity on the part of employers, the next 20 years will see only cosmetic innovations.

DE-mographics - 2001

Non-traditional education has always been, and will continue to be during the next 20 years, an alternative to the traditional format of classroom instruction. Even more important, it is a second-best alternative - not an equal partner. As far back as the 19th Century, a highly motivated student could earn a degree from the University of London without ever attending a class. Other institutions are re-inventing that concept as the scramble for students becomes a survival process.

At the present time most universities and colleges are recognizing that learning can and does take place outside the ivy-covered walls. Degree credits are awarded for:

1. Experiential learning
2. Military and industrial training programs
3. Vocational courses completed
4. Successfully completing "end of course" examinations (CLEP)

Thus, a person who may not have completed high school, could discover that a very significant portion of a degree curriculum has been earned before he or she sets foot in the hallowed halls.

But, despite these encouraging signs, distance education is still a second choice for those seeking college degrees. If time, geography and economics permit, the traditional college curriculum, presented in residence with its attendant opportunities for educational and social interaction, will be the first choice for all except the most dedicated introvert.

That means distance, or non-traditional, education must find its primary growth opportunities in lifelong learning in current careers and re-training for new careers. These are very large growth areas and will become larger. Resident schools will gear up to become competitive, so non-traditionalists shouldn't rest on their oars. In fact, we are already seeing that more and more resident institutions, both vocational and degree oriented, are developing non-traditional approaches. This is good...and it is healthy. The day will come when there are no distinctions between traditional and non-traditional education. All institutions will be judged solely on their missions and the effectiveness of their efforts.

The half-life of career skills varies from one field to another, but in almost every career field, success comes only to those who (1) obtain a solid foundation of skills and knowledge and (2) continue to learn for the rest of their working years. Continuing education can best be delivered to currently employed persons by non-traditional means. A program that delivers high-quality instruction in a manner that minimizes the disruption of the student's employment requirements, family obligations, and economic resources, provides every person an effective solution to the career survival problem.

MINI BRIEFS

of

FRANK N. ALBANESE

Mr. Albanese served as the Executive Secretary of the Ohio Board of School and College Registration from 1970 to 1981. He has received awards for outstanding service from every major private vocational school association. He is an education consultant located in Columbus, Ohio.

* "Distant Education in the Year 2001"

* "Who will Enroll in the Year 2001?"

* "Need for Better General Education in the Year 2001"

MINI-BRIEF 1

Frank Albanese

DISTANT EDUCATION IN THE YEAR 2001

Since I did not attend the May 28, 1981 meeting of the Green Chair Group, I don't understand the term Distant Education.

What is it? Is it remote education? Away from home education? Webster's Dictionary has several definitions of the word distant.

If we are concerned with home training (correspondence education as we presently know it) then I believe regardless of the method of delivery in year 2001, correspondence education will still be with us because of its low cost and convenience to the student.

Many of the current trends of using electronic devices to deliver educational services will be in use. Most of them will be refined and more complex.

As a planning group, I would urge the group to focus on how to better deliver correspondence education to the student using the student's home as the central delivery point.

MINI-BRIEF 2

Frank Albanese

WHO WILL ENROLL IN THE YEAR 2001?

As the economics and marketing process of our country becomes integrated in the world market, I feel our people will have to become more productive if we are to continue or improve the standard of living in the United States. This can only be done by better trained people.

Thus, the marketplace and not the professional educator will call the shots and determine the training and educational needs of the people. Education will become a lifelong learning process; not only to prepare young people for job entry positions but to train and re-train adults as the need arises for current and new careers.

No longer will a high school diploma be sufficient. More and more people will enroll in degree programs, either residential or by correspondence, workshop, etc., to learn new skills or knowledge so they can continue to be productive.

Employers will be one of the main forces in seeing that employees are enrolled in programs to equip them for productivity. Certainly, to be competitive in the future, a company must have a highly trained and loyal work force if it wants to provide a product or service to make a profit and stay in business.

Because families tend to be smaller both parents will probably be employed and thus be enrolled in continuing educational programs.

Also, retired people will seek programs to occupy their leisure time.

MINI-BRIEF 3

Frank Albanese

NEED FOR BETTER GENERAL EDUCATION IN YEAR 2001

I feel that correspondence and non-traditional education will continue to grow within the next 20 years. Also, I think that greater emphasis will be placed on technical and professional education by the marketplace and professional educators.

However, one area needs beefing up if our country is to remain competitive in the world market place. In the past most jobs were broken down into small units and an individual did not need all the skills that will be required in the future. To be productive an individual in the year of 2001 must have more than technical skills. Below are some of the general skills one must have to be really productive.

1. Ability to identify and solve problems.
2. Ability to communicate - both oral and written
3. Ability to evaluate a situation.
4. Ability to pass on instructions to others.
5. Ability to make decisions.
6. Ability to compromise for the good of the organization.
7. Ability to make suggestions for improvement in the enterprise
8. Ability to budget time, money and resources
9. Ability to maintain good health.
10. Ability to cooperate with others.
11. Ability to assume responsibilities and accountability.

18 If a person was trained in the above areas in addition to having the technical skills and knowledge he would really be an asset to his company.

I believe the Green Chair Group should consider this area of education, not for education sake, but to assist our people to be really productive in the marketplace, thus helping to raise the standard of living in our country and make people feel they have accomplished something worthwhile.

MINI BRIEFS

of

C. EDWARD CAVERT

Dr. Cavert is Coordinator of Course Development in the Extended Learning Institute of the Northern Virginia Community College, Annandale, Virginia. He was formerly with the University of Mid America, Lincoln, Nebraska, and nas extensive experience in designing independent study programs.

* "2001: The Challenges to Instructional Design"

* "Spock, Stand by to Beam Down a Course in Accounting"

* "The Future: Through a Crystal Ball or in a Mirror"

Mini-Brief 1

2001
The Challenges to Instructional Design

by

Dr. C. Edward Cavert
Coordinator, Course Development
Extended Learning Institute
Northern Virginia Community College

To meet the challenge of instructional design in the year 2001, we need to consider what technological advances will occur over t he next two decades and how we can use them in the design of instruction for hore study students. In 2001, we will have a broader array of options for reaching students, and they will have new means for reaching us. We will no longer be bound by the limitations of print and the post office as our primary mode of communication. The legacy of Marconi and Zworykin will be as respected then as that of Gutenberg today.

A variety of technological advances will allow virtually instant two-way communication. The imperative for instructional design then will be to use this capability in interactive, individualized instruction.

The electronic devices needed to participate in such instruction will be standard features in most homes. Students will have purchased this equipment for entertainment or job-related tasks. While books will not be obsolete by 2001, people will turn to other sources for up-to-date information needed in daily life. The electronic storage and retrieval of information and instruction will be commonplace.

More specifically, storage and retrieval devices coupled by two-way data links will provide the opportunity for a more personalized, individualized, and interactive instruction. We will no longer have to react to large chunks of student work after long time delays; we will be able to r espond more frequently and more rapidly. Immediate two-way links with the student will permit testing

(traditionally used for end-of-unit assessment) to become part of instruction with immediate scoring, grading, and feedback. These same two-way links will then prescribe the next unit of instruction based on each student's responses to the previous unit.

Home study students will no longer be isolated from each other. Teleconference links will allow students in widely dispersed geographic areas to participate in frequent seminar discussions in a home study course.

New digital video technologies will supplement today's television, making it possible for us to include unique static and moving images in our course materials. Satellite or laser dissemination of these digital video technologies will enable us to exercise controlled access, world wide, to those students whom we need to reach at any given time. Digital video materials will also be accessible through coin-operated vending machines, making possible the design of saleable, self-contained short modules as part of a total course.

Many more design demands will be placed on course developers by the information storage and retrieval revolution that will peak long before 2001. These are but a few examples to uunderscore why we must begin now to create an environment in which our successors will be able to design interactive individualized instruction to capitalize on the new technologies and capacities of human communication that will be commonplace in 2001.

Mini-Brief 2

Spock, Stand By to Beam Down a Course in Accounting

by
Dr. C. Edward Cavert
Coordinator, Course Development
Extended Learning Institute
Northern Virginia Community College

Personal and immediate access to individualized information and ideas will be the hallmark of communication in 2001. The many independent movements in the development of electronic technologies will merge to provide the individual with a simple, convenient, and personal communications system.

Most people in 2001 will have an electronic device, small enough to slip into a brief case or lunch pail, through which they will have immediate and constant access to data for their work, information for their leisure time avocation, and entertainment for their diversion. Those who choose home study education will use this personal communications system to give them immediate access to information and instruction that their 1981 counterparts got in print delivered by the post office.

The unit is small, not much larger than the 1981 hand calculator. It has an electronic display screen on which images and information (moving and static) are displayed. The system is under personal control -- with the individual being able to repeat or by-pass any portion of a lesson. It is an active device. Questions are asked and answered through a simple keyboard. Exams are scored with feedback and additional instruction provided within nano-seconds of the student's response.

Buck Rogers fantasies? Not really, because all of the components exist as separate technologies in the market place of 1981 waiting to be integrated into the personal communications system of 2001.

Computers are used to input, store, manipulate, and retrieve data. Since those functions (translated into educational jargon) also describe instruction,

it is natural that a micro-computer be the core of the personal instructional system of 2001. Even in 1981, micro processor integrated circuits and magnetic bubble technology can produce a personal computer no larger than a hald-held calculator. Increased electronic sophistication will allow many additional features to be added without increasing the size of the device.

Television and video technologies are now on the threshold of the ability to display information on a flat LCD screen eliminating both the bulk of traditional cathode-ray picture tubes as well as the need to use a broad frequency band to transmit analog signals. Pictures you now see on your TV depend on the intensity of electrons bombarding the phosphors on the TV screen. With an LCD screen, the picture is made up of a matrix of dots that are simply turned on or off.

When images --words and pictures-- are displayed from digital pulses rather than analog information, transmission links such as satellites or optical fibre lasers can transmit hundreds of thousands of separate transmissions in the frequency space now occupied by a single TV channel.

Transmission as well as reception on a personal unit is well within the realm of possibility and when coupled with the ability to use individual digital codes to address only a single unit out of many being used at the same time, private two-way communication becomes not only possible but practical.

Since digital pulses are simply on or off, they can be stored on the most primitive (even by 1981 standards) recording systems. Larger recording and storage capacities made possible by ultra miniature magnetic bubbles will permit whole libraries to be readily available for reference and reading on the unit.

None of the technology in the 2001 personal communication system is new in 1981. It will, however, take twenty years to develop the market demand before home study education and training can ride in on the coat tails of entertainment and occupational uses.

Mini-Brief 3

The Future
Through a Crystal Ball or in a Mirror

by
Dr. C. Edward Cavert
Coordinator, Course Development
Extended Learning Institute
Northern Virginia Community College

We all have to predict what home-study education will be like in the future. Consider, if you will, this simple taxonomy to classify people who must anticipate trends in order to survive and prosper.

Futurists see beyond the horizon to plan for things that will be.

Innovators see what's on the horizon and adapt structures and systems to get there.

Experimenters rush a few steps ahead and then stop to analyze how they got there.

Pragmatists follow established paths, carefully avoiding where others have stumbled and fallen.

Educational administrators more often than not face the wrong way, choosing to avoid change rather than deal with its risks.

The challenge in using this taxonomy comes in deciding the level of risk you will take to create conditions now in which forecasts can become reality in the future.

In 1968 John Goodlad challenged educators when he boldly announced that by the year 2000 schools as we know them will no longer exist. High technology will bring education to the student replacing the need to bring the student to education. Goodlad's futurist vision may no longer be over the horizon beyond the perception of educators who now see expanded opportunities for home study education.

The cornerstone of instructional innovation is cemented in the audio-tutoral work of Sam Postlethwait of Purdue. In the late 1960s he saw both an impending shortage of college classrooms and an increasing technology literacy in his students. He adapted his courses for students to study with personal help in the content recorded on audio tape. Students progressed through the course at their own pace. Those who shared this innovative vision have reaped the benefits of increased learning and cost saving.

In the early 1970s the U.S. Office of Education funded large experimental projects prodded by the visions of a national open university by people like Nebraska's Durwood Varner. These experimentalists researched and tested survey results that told them half of the American adult population will enroll in college credit courses by home study using new media technology. America's community colleges have taken the lead in continuing these experiments in operational reality across the nation. The experiments are moving, step-by-step, toward the goal of having enough media courses to fill the need for those who can not or will not come to a campus for their college education.

Most of us share a pragmatist's view of the future as we plan for change in our operations. Leaders in the field of instructional design like Leslie Briggs and Robert Gagne now have disciples who modify, adapt, and accept course development schemes only when all the evidence is in that they will work. Pragmatic course developers selectively choose fragments of the theories of learning and instructional strategies left in the paths of people like B.F. Skinner and Jerome Bruner. Even the pragmatist in instructional media has carefully charted the path taken by Joan Cooney and her people at Childrens Television Workshop so that the direction now of many of the effective media productions reflect what has worked on Sesame Street.

If the taxonomy accuses educational administrators of facing the wrong way, it does so with the recognition that they must also face their boards and the public that supplies a tax base for their endeavors. In 1965, the abrupt intrusion of federal funds into public education force-fed media devices through the classrooms into storage closets of most schools. Embittered with their experience in buying media few were equipped to use and materials fewer still were equipped to produce, the educational administrator may even today reject the use of the computer in his school because television failed in 1965.

Three factors emerge from this classification scheme. First, risks are greater at one end than at the other. At the same time, time to plan and institutionalize change is longer with a high-risk vision. Finally, a long-range, high-risk, proactive plan of change has higher payoff potential than does a reactive change planned with a low-risk vision of of the immediate future.

MINI BRIEFS

of

RUTH CROWLEY

Ruth Crowley recently retired after 30 years of distinguished service with the U.S. Department of Education, Washington, D.C. She is best known for her tenure as Director of the Institutional Eligibility Section at the Division of Eligibility and Agency Evaluation. She is currently working with the Smithsonian Institution, Washington, D.C.

* "The Year 2001 -- An Older Mature Society"
* "Do It Yourselfers in 2001"
* "Home Communication Centers mean Distant Education"

Persons beyond traditional school age will have cultural and economic motivation to communicate with alien cultures. Spanish, Russion, and Chinese will predominate with a possible upsurge in interest in Esperanto.

Because many adults living in the year 2001 will no longer be a part of the traditional educational setting, distant education will be provided through the medium of the home communication center. This equipment will also be used to attract students, provide current information on educational opportunities and will take the place of the traditional counselor. The year 2001 home communication center will be the ideal vehicle for fulfilling the educational needs of tomorrow and may well be a major competitor to todays traditional educational system.

Mini-Brief-2

Ruth Crowley

"DO IT YOURSELFERS" IN 2001

The complex society of the year 2001 will require that adults be more attuned to self-reliance and self-help. For example, as labor costs increase, more and more adults will be performing "do it yourself" work on their homes and possessions. We have seen in our era the increase in "do it yourself" stores. This pheonomenon must be followed by better and more sophisticated training, to enable the individual to perform these tasks as well as the professionals. Skills must be up-dated as changes in technology take place. With more and more leisure time available the "do it yourselfer" will take on more and more complicated projects. Sales personnel in these "do it yourself" stores are often not capable or too busy to train customers in the use of the equipment or items they sell. As the cost of sales personnel in these stores escalate and the caliber of the sales force decline, store owners must be able to offer substitute instructions if they are to continue to exist. This will give distant educators an excellent opportunity, in cooperation with the manufacturer, to prepare and sell instructional courses as a part of the equipment or item sold.

Another area of education could be in the field of medicine. As medical technology advances it will be necessary for the adult of 2001 to be better informed on these advances as they pertain to personal or family health. Hospital care in the year 2001 may be rare if the cost of hospitalization continues to rise. Families may therefore be forced to care for their sick at home, using sophisticated medical equipment which may have been rented or

purchased.

Distant educators must devise ways to meet the demands of an ever changing society. One suggestion would be to offer the traditional home study course curriculum followed by continuous informational services designed to keep the information current.

Our sophisticated society of 2001 will bring with it many opportunities for distant educators to keep members of that society self-reliant.

Mini-Brief - 3
Ruth Crowley

HOME COMMUNICATION CENTERS MEAN DISTANT EDUCATION

Home communication centers will be one of the most widely used ways to deliver distant education in the year 2001. Personal home computers will play an important part in these home communication centers. Personal home computers will be as common in every household in the year 2001 as the hand calculator and television set is today. Advances in technology are resulting in decreasing the price and size of home computers. As the use of this equipment expand into the personal lives of society, distant education will play an important part in teaching individual owners to use prerecorded programs and how to program home computers in order to reach their maximum use and capability. Home computers will be used to keep family fiaancial records, write checks, maintain a balanced bank account, keep records of credit card use, compute income taxes, provide up to the minute information on the stock market, etc. They can also be used to teach a variety of subjects geared to the particular needs of our society in the year 2001.

Another important use of the home computer will be to provide counseling services to attract students. It will be used to inform students on current information on careers, potential needs for certain professions and occupations, employment information, job listings, etc. It can provide information on educational institutions, course offerings, entrance requirements, tuition, student services, and a variety of information which will enable the prospective student to make better informed decisions on his educational as well

as employment goals. Information provided by the home computer will be superior and much more sophisticated than the information being provided today by the average school or employment counselor.

Home computers will be found in every home as the television set and hand calculator is today. It will be the ideal vehicle for fulfilling the educational needs of tomorrow. It will give distant educators fantastic opportunities to expand and prosper.

MINI BRIEFS

of

LOUIS E. FRENZEL

Mr. Frenzel is Senior Vice President, Production Development at the McGraw-Hill Continuing Education Center, Washington, D.C. His experience includes service in course and kit development at McGraw-Hill's National Radio Institute (NRI), as well as former Director of Education at Heath/Zenith Educational Systems, St. Joseph, Michigan.

* "Educational Materials for Distant Education in 2001"
* "Distant Education Sources in 2001"
* "Implications of Brain Research for Distant Education in 2001"

NHSC Green Chair Group

Mini-Brief 1

EDUCATIONAL MATERIALS FOR DISTANCE EDUCATION IN 2001

by

Louis E. Frenzel

McGraw-Hill Continuing Education Center

The educational materials for individual self instruction and home study in the year 2001 will be essentially the same as those used today. There will still be a considerable emphasis on the use of print. Books will remain one of the most efficient and effective ways to learn. But despite the predominence of print material, there will be an increase in the use of other educational media such as video tape and disc, computer aided instruction (CAI) on microcomputers, and cable and satellite TV.

All of these media will undergo progressive evolutionary improvements during the next 20 years. I also believe that we can expect to see several new forms of media at that time such as holography or interactive computer graphics simulations. We will also see practical combinations of present media such as video discs and microcomputers or Teletext and video disc.

The most significant point is that all of these high technology media are available to us today. However, no proprietary home study schools or universities are taking advantage of them. The main reason

for this is cost. Educational materials in video or CAI are difficult and expensive to develop. The media and the hardware to dispense it (VCR, microcomputers, etc.) represents a significant investment. It does not seem desirable or practical to pass along cost of the hardware to the home study student.

The challenge of the distance educator is to find practical, innovative ways to make use of the present and the future media. Perhaps new technological breakthroughs will provide the answer. The result will be faster, easier, more interesting and more effective learning.

NHSC Green Chair Group

Mini-Brief 2

DISTANCE EDUCATION SOURCES IN 2001

by

Louis E. Frenzel

McGraw-Hill Continuing Education Center

The primary sources of distance education today are proprietary home study schools and universities. Millions of individuals enroll annually for a variety of career training and continuing education programs. However, in 2001 both of these sources will not be a major factor in distance education. Most distance education will be conducted primarily by industry, professional organizations, and libraries.

The reason for this is that home study courses as they are now structured and conducted will not be practical cost-wise. The cost of developing, servicing and delivering such programs will increase over the years. In addition, high marketing costs as well as the unique problem of "realization" will make traditional home study courses from proprietary schools a poor value in comparison to some of the newer systems. Unless the present institutions can find ways to overcome their problems, they will not be a major factor in distance education in the future.

Another major change to expect in distance education in 2001 is that in delivery systems. By delivery systems I mean the way in which the materials are supplied to the student. Today the mail is the primary delivery vehicle. Courses are sold by mail and students enroll and

receive their learning materials by mail. Examinations and correspondence go by mail between the student and the school.

In the future, mail will become a less used delivery system because of cost and reliability factors and competitive systems. Greater use will be made of the telephone, computer networks as well as cable and satellite TV. All of these methods of communications will allow the material to be brought into a student's home from some distance location as well as two way exchanges.

NHSC Green Chair Group

Mini-Brief 3

IMPLICATIONS OF BRAIN RESEARCH FOR DISTANCE EDUCATION IN 2001

by

Louis E. Frenzel

McGraw-Hill Continuing Education Center

A considerable amount of progress has been made in the field of mind and brain research during the past ten years. Scientific findings not only reveal but clearly demonstrate that humans have capacities well beyond normal performance. For example, researchers have discovered the power of the mind for expanding awareness, self healing, improved problem solving, and accelerated learning. The implications of these findings for improving ourselves, society and distance education are enormous. While such research is only just beginning to be translated into practical everyday usage, over the next twenty years significant progress will be made. In the year 2001, mind/brain techniques will permit heretofore impossible levels of understanding, learning and human performance.

Some of the psychotechnologies of mind/brain research that bear watching are:

* Biofeedback - Biofeedback is useful in learning to relax. Relaxation in a stress-free environment makes learning easier. Biofeedback uses electronic devices to sense brain waves, muscle activity and skin temperature, all of which give an indication of the state of stress and relaxation.

* Hypnosis - Hypnosis has proven to be extremely effective in improving learning. For example, post-hypnotic suggestions can improve an individual's understanding and retention.

* Meditation - Meditation methods (Zen, transcendental, etc.) can also be used to improve learning.

* Mind control - Techniques such as est and Silva can also be used for more effective education.

You can look forward to some truly exciting and significant advances in education because of the growing interest in and acceptance of mind/brain research.

A good introduction to this subject can be found in the book The Aquarian Conspiracy (Tarcher) by Marilyn Ferguson.

MINI BRIEFS

of

CHRISTOPHER R. C. HOPE

Mr. Hope is the President of the Granton Institute of Technology, a private correspondence institution headquartered in Toronto, Canada. At GIT, courses are offered in vocational topics, from engineering technology to fashion design. Mr. Hope has offered 5 mini briefs for consideration.

* **"Dial-A-Course"**
* **"Designer Edu-Packs"**
* **"Education a La Carte"**
* **"Your Friendly Neighbourhood Edu-Shop"**
* **"Proprietary or Public"**

Mini Brief 1 - DIAL-A-COURSE
C.R.C. Hope - 28 July 1981

STUDENT SERVICE ORGANIZATIONS - OVERVIEW

Unlike the fragmented 1980's learning at a distance, students in 2001 will use standard accredited knowledge kits, delivered through standard accredited delivery systems and be looked after by standard accredited student service organizations or schools as they are sometimes called.

The knowledge kit will be standardized to the same degree as the automobile is to-day and marketed in the same way. The majority of educational organizations, both residential and learning at a distance, will use the same fully accredited standardized packages.

With the standardization of accredited knowledge kits and the standardizing of delivery systems, every organization offering resident courses to-day may well offer learning at a distance options. This means that both resident schools and learning at a distance organizations will be in the learning at a distance business.

Your choice of a student service organization may depend simply on its location, since accredited standardization will guarantee the excellence of the education it offers.

In fact, many students would choose their friendly accredited neighbourhood Edu-Shop which will offer the full range of courses and delivery systems and at the same time save on communication costs.

Learning at a distance in the 1980's is in its infancy, catering to a privileged few - very much like the auto manufacturing before the Model T. By 2001 standardization of the industry will enable it to grow beyond the wildest expectations - bringing knowledge to the world on an unprecedented scale.

Mini Brief 2 - DESIGNER EDU-PACKS
C.R.C. Hope - 28 July 1981

STANDARD EDUCATION - PACKAGE AND KITS

The single biggest breakthrough in education in the 20th century will have been the universal acceptance and accreditation of the standard educational package or knowledge kit as put out by the survivors of great publishing companies or the Big 6 as they will be called.

Knowledge kits or knowledge packages will be knowledge standardized into pre-determined accredited segments. As automobiles are promoted in the 1980's so knowledge kits will be promoted by the Big 6 in the year 2001. Each company would offer essentially the same material with apparent rather than real differences.
This means in the year 2001 a student who wishes to study micro-computers, would have a choice of at least 6 universally accepted programs, e.g. knowledge-kit 3003/3b might be one of them.

The average programme would include the 4 essential parts:

Student Package	:	subject matter presentation, work book or interactive section, self check evaluation and feedback.
Perceptors Package	:	teachers guide and instruction manual, formal test and grading material.
Qualifiers Package:	:	instructions for independent testers and evaluators guide.
School Package	:	counselling and promotional material, student service guide.

The cost of developing knowledge kits is so high that they have to be marketed to the largest practical audience. Hence, their availability through a large range of delivery systems, ranging from text books and video discs to data bank retriever systems.

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STANDARD DELIVERY SYSTEMS

Success of the standard knowledge kit will depend on marketing it to as many potential customers as possible - hence the use of diverse delivery systems. These systems in conjunction with the knowledge kit manufacturers and service organizations will be vying for the consumer dollar. Many of the systems that are available in Toronto in 1980 will be available world-wide by the year 2001.

For Toronto students not wishing to attend a "live lecture" the following delivery systems are currently available.

A Lecture notes

B Books made up from the lecture

C By dialing the local Data Bank and reading the material off the TV screen (e.g. Globe and Mail Info Service)

D Cassettes made up from the lecture notes (e.g. Southam Communications Ltd. Series on Management)

E From a video tape lecture performance provided by a professional communicator (e.g. Clark's Civilization Series in Fine Arts)

F From the 8mm or 16mm of the performance (e.g. Board of Education and Educational TV Limited - both rent out educational films)

G By dialing Dial-A-Course and obtaining the same audio-visual performance from the Data Bank through your TV set at home (e.g. 2 systems available through (1) Teledor Canada or (2) Norpak Canada)

Many delivery systems in the year 2001 will offer both the straight lecture and the interactive versions similar to Control Data's 1980 Plato Series, and enable students to choose the system best suited to their individual temperaments.

C.R.C. Hope - 28 July 1981

LOCATION OF THE STUDENT SERVICE ORGANIZATIONS

The first choice a student has to make is which student service organization (school) should he choose for the standard student services of counselling, ordering of material, choice of preceptor, testing, grading, evaluation, qualification, motivation, finance, placement, etc.

All factors being equal the student might choose from the following student service organizations offering basically the same services.

A Non-aligned free enterprise, Learning at a Distance organizations
B Captive Learning at a Distance organizations (airline schools, control data, etc.)
C Extensions to traditional residential educational institutes including high schools, technical schools, colleges, universities, etc.
D Training departments of corporations and large government departments
E Training departments of non-profit Trade Associations
F Public libraries
G Friendly accredited neighbourhood Edu-Shops

The majority of learning at a distance students in the year 2001 may be best served by their friendly neighbourhood Edu-Shop, since standardization of the accredited knowledge package and the choice of delivery systems will enable Edu-Shops to provide a full range of accredited services, and at the same time avoid communications costs that would be incurred if students used an organization outside his or her area.

As McDonalds in 1970 standardized the service of fast food, so Edu-Shops would standardize the service of education to students in 2001.

MINI BRIEF 5 (PROPRIETARY OR PUBLIC)
CRC Hope 28 July 1981

REBIRTH OF THE PROPRIETARY SCHOOL GIANTS

By 2001 virtually all top quality distant education material will, as in the 1980's, be produced and distributed by the private sector. Public sector employees will continue to share their expertise with the private sector publishers whether it be by writing text books or correspondence courses and will be amply rewarded. Those who do not share that knowledge and restrict their expertise to their own local service organizations will go unrecognized and not have the revenue they need to flourish.

With the supply of Edu-Kits in the hands of the private sector to whom will the student turn for service, proprietary or public sector schools? Accreditation is a factor that cannot be ignored. The question we ask is: will local education administrators allow for the testing, evaluation and accreditation of graduates from non state funded schools.

Some educators feel that students will continue to be accredited on what they know regardless of their source of learning. Others feel that the proprietary school graduates will be outlawed from state accreditation systems.

In the long run it may be the local employers who need employees who become the arbiters of what education of prospective employees is acceptable and what is not.

In some jurisdictions this is the case in 1980. For instance, in Ontario, Canada the public system and the private system exist alongside one another with literally no cross crediting between the two systems. However, Ontario has particularly enlightened administrators and what happens there may not necessarily happen throughout the rest of the world.

In the 1980's we see an increasing acceptance of proprietary school distant learning graduates. If this trend continues we may well see the resurgence of a new breed of proprietary school giants, who, unhampered by funding and localization agreements, will see the world as their market and by sheer competence and efficiency will dominate the education arena by the year 2001.

MINI BRIEFS

of

SHERRY C. HUGGINS

Sherry Huggins is Director of Agency Training for TWA Airlines. She is also the Director of Trans World Travel College in Kansas City, Missouri. The college offers a combination home study/resident course in Travel Agent Training. Ms. Huggins is a Certified Travel Consultant (CTC).

* **"Who will Enroll in DE in 2001?"**
* **"Demographics and Enrollment in Profile"**
* **"Distant Education, Inc."**

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WHO WILL ENROLL IN DE IN 2001?

As never before, the entire field of education and training is in a climate of change. Success in coping with this change can be measured in terms of growth and profitability, brought about in part by knowledge of demographics and technology, and how both can be put to work for a smoother, more creative way of doing business.

By the year 2001, earth will number over seven billion people -- double today's population.[1] The U.S. will account for approximately 261 million.[2] Developments in nutrition will coincide with a technological evolution that will change our lifestyles radically. While it may be difficult to predict what life will be like, we know that 95% of the science that will regulate our lives is unknown to us at the moment. Today, for example, the knowledge we are gaining through science is doubling approximately every five years.[1]

Given the predicted population, plus increased leisure time brought about by change in lifestyles, it's safe to assume that the market for distant education will be almost unlimited.

The U.S. birth rate is edging back up after a long decline. By the mid 80s, births could again total more than 4 million a year.[2] By 2001, the number of young people preparing to enter postsecondary educational institutions and vocational training schools will again be substantial.

Early in the next century, the baby-boom generation of the [illegible]nd 50s will begin to retire. Since retirement dollars may not be as [illegible]ful as once thought, we can assume that a healthy number of th[illegible] on adult[illegible] will [illegible] learning experiences in order to cope with retirement, a life-change event.

In addition to 18-25 year olds who will study for careers, and over-65 adults who will seek self-fulfillment through studies, single parents and empty-nesters (ages 26-45) will constitute a large population favorably disposed to distant education. And, in the 46-60 age range, increasing numbers will seek training for new careers. Change at mid-life will be an acceptable form of behavoir.

The distant education enrollment process by the year 2001 will be accomplished by 2 principal methods: 1) electronic devices in the home, and 2) regional counseling centers. These centers will not be government or state supported, but industry supported. Vastly improved high school counseling will be the main channel of enrollment for the teenage group.

Adults need to be able to integrate new ideas with what they already know if they are going to keep--and use--the new information.[3] Distant education fuels this idea. Training in the field, in the home, will be more quickly assimilated and put to use than traditional education. This will have great appeal to the average adult learner.

Mini-Brief 2

DEMOGRAPHICS AND ENROLLMENT IN PROFILE

Labor Force

The decade of the 80s already is showing a reshaping of employees' values. A contemporary employee is emerging who values leisure time, family, then work. He desires his work to be challenging, interesting, and to provide developmental opportunities. Education and training opportunities in the future will have to meet this criteria too.

By 2001, U.S. workers will work less than 30 hours weekly at their regular jobs, leaving more time for leisure and to study. The average salary of the American worker will be $75,000 annually.[4] On the other hand, increased moonlighting by the labor force will decrease study time for many, necessitating more "do-it-on-your-own-time" study opportunities.

The top 15% of the U.S. labor force will continue to expand its knowledge,[4] a good target for distant education. The middle percentage, roughly 70%,[4] will be steady workers, although not all self-starters. Creative counseling will help sift out the potential students among the 70%.

Minorities

25% of the U.S. population will be black.[4] Minorities as a whole will be striving harder than ever to obtain the training that will put them in positions of decision-making.

Foreigners

In addition to the projected U.S. population of 261 million, as many as 12-15 million aliens may enter the U.S. per year.[4] Besides the obvious language and customs training, they will need

training in vocational skills. Likewise, 5 million Americans will be located overseas.[4] This presents enormous opportunities for distant education.

Population Shift

Currently, 25% of the U.S. population is moving somewhere else -- in city, state or country.[4] The age 65 and over population will increase 24.6% by the year 2000.[2] That population will be shifting to warmer climates. Support and recreational services will change. Younger adults who will manage these services will require a special kind of training that distant education can provide.

Enrollment

Industry supported regional counseling centers will operate as non-profit cooperatives. Counselors will be trained and compensated by distant education suppliers who are members of the cooperative. One benefit to this system is the objective counseling services it produces. A number of counselors of different ages, attitudes and temperaments will be available to work with prospects. A better match between counselor and prospective student will produce more favorable long-term results than are gained today by sales representatives in the field who work for one organization.

For those who "grew up" in the electronic age, and those who don't need the services of a counselor, enrollment will be as simple as pushing a few buttons. There will be an electronic library on television which will feature textbook information and/or act as a clearing house for available training programs.[5] Prospective students will preview, select, and study using television. 55

Mini-Brief 3

DISTANT EDUCATION, INC.

It's the year 2001. Educational assistance has drained away. Government, corporation and private industry funds have shrunk for everything except the essentials, e.g., research, technological advancement and customer service. Entire training departments within some corporations have disappeared. High school education is now the primary mode of training low- and middle-level management.

Wait a minute!

By 2001, industry, not the traditional academic institutions, will very likely be dictating the types of training. Wouldn't it be ironic then if industry couldn't support the training it espoused.

There is an alternative. What better test to see who in low- and middle-level management has the desire to succeed than to offer challenge through home study programs. It will cost senior management little or nothing to find out who has initiative and who the top performers are.

Corporations will not be able to afford employees time away from their jobs for learning. [One exception would be Quality Work Circles, which improve products and productivity, but not necessarily the worker.) In other words, companies won't be developing their employees for promotions. If employees who take charge of their own growth are successful learners, they will be the ones to move up.

People, after all, are becoming more independent. They want their learning to be problem-centered, personalized and accepting of their need for self-direction and personal responsibility.[3]

Could it be that companies already recognize this? Doubtful.

FOOTNOTES

1. Giuliano Ferrieri, "Food for the Future," World Press Review, January 1981, pp. 36-38.
2. J. Frank Diggs, "Baby Boomlet: Its Impact on the '80s," U.S. News & World Report, June 15, 1981, pp. 51-52.
3. Ron and Susan Zemke, "30 Things We Know for Sure About Adult Learning," Training/HRD, June 1981, pp. 45-52.
4. Clark E. DeHaven, Director of Executive Programs, Graduate School of Business Administration, Michigan State University, excerpts from lecture, "Travel Agency Management and the Contemporary Employee," delivered at Missouri Valley-sponsored combined ASTA Meeting, Kansas City, June 12, 1981.
5. Walter Cronkite's "Universe," CBS Television, regular program, Tuesday, July 21, 1981.

MINI BRIEFS

of

LAWRENCE J. KELLER

Dr. Keller is the Director, Division of Extended Studies at Indiana University, Bloomington, Indiana. He served for 7 years as the Director of IU's Independent Study Division. He is a former Chairman of the Division of Independent Study, National University Continuing Education Association (NUCEA).

* "The Campus Connection: Pulling the Plug"
* "Learning in Three Dimensions"
* "Futures: The Emergence of Distant Education"

Mini-Brief One

THE CAMPUS CONNECTION: PULLING THE PLUG

by

Lawrence J. Keller

Distant educators now and in the year 2001 must consider that regardless of the troubles that plague universities during the next twenty years, traditional, campus-based institutions will still have the power to "pull the plug" on our operations by refusing to recognize credits earned through distant study.

The academic world is already rethinking its acceptance of such non-traditional methods of learning as: College Level Entrance Program tests, credit by examination, credit for life experience, and weekend colleges. The argument is that these programs lack academic quality and substance and thus devalue the institutions accepting such credits. Couple this with abuses by students, instructors, and administrators in the areas of extension courses, and the correspondence-study distant educator's neck has been stretched even further.

If distant study is to survive past 2001, the subjects taught and the teachers who teach them must mirror the academic standards set by campus-based institutions. We could encourage more students to complete our courses by making them easier, but that would surely mark the end of distant education. Campus courses inspire students to do their best work by the immediacy of the classroom--the instantaneous and extensive contact with teachers and other students and the potential for supplementing the printed word of textbooks, with visual and aural information--be it demonstrations, students' hands-on activities

observed by the teacher, films, or simply the enthusiastic presence of an instructor. Classroom students find their academic work attractive because they learn and perform it in several media; their rewards for doing the work are attractive because others are present to react and respond. With twenty-first century technology, distant education will provide these very advantages of classroom education. Satellite communications will bring distant students together in an electronic classroom that reaches from one corner of the globe to another; it will permit us to deliver course content not only in textbooks--the printed word--but in video demonstrations and in "class" discussion by way of electronic hookups. With these technologies, we don't have to resort to making courses easier; we can maintain the rigor of a classroom course by building into distant education the same systems of support and encouragement that have worked for centuries in the classroom. And we can add a special rigor of our own by the intellectual challenge of responding to fellow students whose backgrounds and daily activities are as different as the corners of the globe.

The academic constraints, together with the legal restrictions already being placed on continuing education and skill-training courses, should make our mission clear. If we want to keep from getting our heads chopped off, we will have to play by their rules, or even better to establish our own and make them better than theirs, so our quality becomes an example to them.

Mini-Brief Two

LEARNING IN THREE DIMENSIONS

by

Lawrence J. Keller

Television has been around a long time; education even longer. And yet, except for one or two notable exceptions such as Sesame Street, no one has been able to combine the two effectively. Whether the public has refused to accept educational television because of inconvenient scheduling or because educational programs lack quality, the year 2001, with its flood of video distractions and electronic wizardry, will only add to viewers' dissatisfaction and confusion.

If we are going to make education exciting and educational programs competitive with entertainment programs, then we must use technology to dazzle consumers in the same way they are being dazzled by today's electronic game craze. People who wouldn't spend five minutes watching a TV screen at home can be found at the local arcade, paying money to watch a TV screen! But the magic they can perform on that screen! They can protect the world from Space Invaders, blast Asteroids from the sky, or eat little goblins with their Pac-man. At the same time, they are being educated--painlessly, pleasantly.

In the year 2001, we will hypnotize our students through the magic of holography. Using equipment similar to a movie projector and a white turntable equipped with mirrors, our course instructor will emerge life-size and three-dimensional in the student's home. Imagine the medical student watching spell-bound as the instructor dissects a cadaver, or the eager do-it-yourselfer peering under the hood of his holograph car while the engine is being tuned. Students will eagerly play and replay their lessons, viewing them from different angles--and learning.

The educational applications of the holograph are as endless as they are exciting. Distant education has always used technologies to bridge the miles between student and teacher. Holography is one more girder in that span. But with it, distant education will leap into a capability for graphic demonstrations as far away as a switch and for flexibility in presenting demonstrations--for

example in a medical class moving in an instant from a dissecting theater to an operating room to a patient's bedside--that currently surpasses what can be done in the clinic, student laboratory or classroom. In our normal progress of building links with our distant students, we will lead the way for classroom education.

Mini-Brief Three

FUTURES:

THE EMERGENCE OF DISTANT EDUCATION

by

Lawrence J. Keller

Distant education was born out of the need to aid students with wants and needs that the university could not otherwise serve. The traditional university is designed to serve young adults who can afford to give up several years of their lives solely to the pursuit of learning; it will always exist because this group will always exist. But as the value of and respect for education has increased and as more people have won more leisure to learn, so more students from more varied backgrounds have approached the university for help. These students are often older (and perhaps younger) than the traditional student; they are often busier because they must continue to earn a living or must be raising a family while they study. They often approach the idea of continuing their education with a different notion of what learning does and what it means. For them, education is a movement in a new direction, not a natural continuation of a line that began with primary school (as it is for the typical campus student). As a consequence, these special students may view education as a frightening and dangerous course, an intimidating step into the unknown.

The ongoing mission of distant education is to make this step a comforting and rewarding one, to convince those who come to us that education is not a foreign, impenetrable land.

Distant educators have brought the unfamiliar world of education closer by using the technology already familiar to these students. We have reached them through newspapers, radio and television broadcasts, and government mail; each new technology finds its way into the distant educator's repertoire to make learning more flexible, more easily accessible, and less frightening. Millions of people who would have been repelled or unsatisfied by traditional, campus-based institutions have found a sympathetic and supportive way to study at a distance.

Thus, distant education has combined two trends of modern culture: It has met the increased desire for learning by increasing numbers of students with the increasing capacities of our technological world. These trends will continue; our future course is clear. Distant educators must be leaders and innovators, expanding our domain by way of the video disc, satellite and computer, making education available to more people in more places at more times--at the flick of a switch. In the process, we will not only draw more people into the traditional halls of learning, but perhaps even show campus educators the way towards improved teaching.

MINI BRIEFS

of

BETTY JO MAYESKE

Dr. Mayeske is the Director of the Open Learning Fire Service Program of the International Association of Firefighters, Washington, D.C. She has over a decade of experience in developing and administering independent study programs. She founded and was the first Director of the Open University at the University of Maryland, College Park, Maryland.

* **"Educational Materials for the Student who Learns at a Distance from a Classroom in the Year 2001"**

* **"Designing Educational Materials in the Future"**

* **"International Center will Provide New Opportunities for Educators and Learners"**

MINI-BRIEF 1

2001 - Tools of Tutelage

EDUCATIONAL MATERIALS FOR THE STUDENT WHO LEARNS AT A DISTANCE FROM A CLASSROOM IN THE YEAR 2001

Betty Jo Mayeske, Ph.D.

The majority of people who choose to study and learn in the year 2001 will study at a distance from a traditional classroom. Adults over twenty-five, with home and job responsibilities, will desire a flexible learning system free of the time and place constraints of the classroom. These students will be likely to have had some traditional college education and extensive work experience. They will be eager to upgrade their current occupational knowledge or prepare for a career change. Many will wish to resume work after breaks in employment. Some potential students will want educational materials that emphasize conceptualization and abstract ideas that they missed earlier or were ill-prepared to accept as younger learners. Many will have developed new interests and will wish to advance those interests with specialized study.

Those who can claim a right by reason of tradition, experience and resources, or a claim of special creativity will continue to be the suppliers of educational materials in the future. Credentialing or verification that learning has taken place will still be important. Credible verification by examining groups or by self-examination will be desirable, so educators must be both responsible dispensers of and evaluators of educational information.

The knowledge explosion will continue. But learners of the future will not be content with general materials designed for broad audiences. Learners will want specialized materials, individualized as to content and level, and they will want it available on demand.

Educational materials will include printed words, voices, and pictures. And all materials will plan for the interaction of persons and groups. However, there will be at least two educational delivery methods available. The written word, and audio and visual components, could be delivered totally through a home or office computer system in either an interactive or non-interactive mode. All the components of the educational materials would be available on a personal computer in the home or the workplace. Another way to make available educational material is to mix and match delivery forms. In this system, the book remains the dominant form for reproducing the printed word. Computers will be used to present materials that require intensive drill and disciplined review. Also, the resources of libraries and research centers will be accessed by computers. Lectures and group discussions will be presented on radio and audio tapes. Video technologies will provide graphics, access to special people and places, and visually exciting material. Useful learning aids such a slides and charts will also be available. The essential interaction of people and groups will take place by telephone, video teleconferencing (probably freeze-frame), and interactive telecommunication systems.

The necessary tools of learning—words, voices, and pictures—and the essential interaction between teachers and learners must be brought together in a carefully

planned format. The necessities must be provided, although the means of delivering these essentials can vary. Without cohesive and careful planning and a true emphasis on resource sharing, the educational materials of 2001 will be a messy, motley mixture of materials that serves no purpose other than to teach educators what they continue to do wrong.

Betty Jo Mayeske

MINI-BRIEF II

DESIGNING EDUCATIONAL MATERIALS IN THE FUTURE

EDUCATIONAL MATERIALS

In Mini-Brief I, I postulated some assumptions that I saw as fundamental to the development of educational materials for distance education systems in the year 2001. Again, they are:

- the adult student will want sophisticated, individualized material available on demand;
- credentialing or verification that learning has occurred will still be important (either self-assessment or outside evaluation);
- words, voices, pictures, and planned person-to-person interaction will continue to be the necessary tools of learning;
- delivery of these combined tools will be either totally by home or workplace computer or in a mix-and-match delivery form (books, computers, radio, and audio tapes; video technologies; and interaction by telephone and telecommunication systems).

Coherent planning for the development of educational materials is essential. If an atmosphere of cooperation and sharing does not exist, potential developers, institutions, consortiums, and not-for-profit and publically funded groups will produce materials designed to acknowledge only their own resources and their own limited marketing needs. We will continue to have too much of the same thing. Another problem is the immense variation in the developmental cost of educational materials. Currently the

video course developed for a million dollars and the single faculty outline course that costs $300 both award three college credits and lay claim to equal educational quality.

Once these critical problems are solved (see Mini-Brief III), some guidelines for the development of educational materials may be established. First, educational materials should be developed by teams of experts. Theoretical discipline experts, experienced occupational-vocational practitioners, instructional designers, and experts in the various delivery forms should organize and prepare materials together. Team members should share a commitment--as well as expertise and experience--to the learning needs of the distant learner. Course teams need not represent the same institution or group or share the same schedules and location. Team members need to work for short periods as a team, to agree that their work will be reviewed and possibly modified, and to produce within reasonable time frames.

The roles and responsibilities of all members are carefully defined and all schedules and deadlines are reasonably mapped out. Two additional team members play clearly defined roles. At the onset, an Evaluator plans the strategies and methodologies of two necessary forms of evaluation--developmental review and revision and product testing by students and instructors. An Executive Producer--an old title for a new role --guarantees that content and media experts work together to produce material balanced with respect to quality and cost.

Betty Jo Mayeske

MINI-BRIEF III

INTERNATIONAL CENTER WILL PROVIDE NEW OPPORTUNITIES FOR EDUCATORS AND LEARNERS

EDUCATIONAL SERVICES

In Mini-Brief II, I pointed out some problems that could prevent the necessary development of educational materials for the non-classroom learner in the Year 2001. These problems are epitomized by a lack of coherent planning and result in haphazard use of people and dollar resources. Coherent planning for the Year 2001 should include a new educational service--an International Education Materials Development Center.

I have known, participated in, and developed cooperative ventures that involved institutions and groups working together to further a shared educational goal. While I am not specifically talking about that here, it is important that institutions and groups continue to plan and share.

My suggestion now is that an international center be established to develop materials for use in the next century. Here, individuals, and only individuals, will present their talents, interests, and experiences for consideration as course team members. It is far easier to expedite development if people can function without having to move their entire college, department, or group with them or on their behalf.

Obviously some group--Federal, public, or private--will have to serve as broker of developmental monies and as production coordinator for the educational materials. Also, this group will need to represent the learning needs of potential students and be able to describe these needs to the developers of the materials. Further, this group will need to guarantee that the final educational product serves defined educational objectives and meets stated standards of high quality.

However, as a broker, the International Education Material Development Center does not need to develop its own staff, build its own facilities, or respond to one student group. Nor, as a broker, will the Center bring together existing groups and institutions to develop materials; rather it will announce course team opportunities to individuals who will accept short- or long-term assignments. Further, it will include as course team members persons who can provide production capabilities.

This proposed center will be difficult to actuate. But, if we continue to depend only upon institutions and groups to produce educational materials, we will not meet the educational material demands of the Year 2001. The International Education Material Development Center would provide opportunities for talented, productive individuals while providing the quality educational materials that will be needed in thirty years.

Interaction between learners and institutions and between learners and learners is essential and should be planned from the beginning. The first outline of the educational material should designate appropriate learning breaks where interaction will be welcome and educationally supportive. Modes of delivery are designated, such as telephone, telecommunication systems, Dick Tracy-like wrist radios for short distance communication, and face-to-face meetings. Careful orientation materials describing roles in the interaction system are prepared for the instructor-facilitator, as well as for the student.

All of these components--the word, the voice, and the picture--will be a part of educational packages. Reasonable cost parameters must be devised or the demand for individualized educational materials will not be met. One example may suffice: too often visual educational material displays scores of actors and location shots with full production techniques that add excessively to costs. For "picture" components, simple production schemes should be considered with an emphasis on instructors exploring concepts, groups discussing common learning concerns, word outlines highlighted by computer graphics, and useful slides and pictures. Our educational material needs will be so great that we will not have the luxury of combining entertainment standards with educational production.

MINI BRIEFS

of

DAVID F. MERCER

Dr. Mercer has over 14 years experience as a correspondence educator. He is the Director of Independent Study by Correspondence at the Pennsylvania State University. He is a past Chairman of the Division of Independent Study, National University Continuing Education Association. He has served for 7 years on the Pennsylvania Board of Private Correspondence Schools.

* "Educational Services: The Keystone Factor"

* "Education Services: The Vital Link"

* "Distance Education: Some Random Thoughts"

Mini Brief 1

Educational Services: The Keystone Factor

Without Educational Services the structure of distance education would collapse. It makes little difference if we speak of the present 1981, or if we discuss it in the future tense, such as 2001. Educational Services is the critical factor that differentiates between self-directed learning projects[1] and an organized, institution-based independent study, learning system.

This essay assumes that the educational process being discussed has an institutional base, be it a proprietary organization, a high school, a business or industry, a college or university, a governmental body, or a nonprofit agency. The educational activity then can be peripheral or central to the organization's main purpose.

The term Educational Services is very descriptive of its meaning. It means simply, service to, or in support of, the educational process. For whom is the service provided? It is provided for the student, both potential and actual. In summary, educational services is comprised of various elements that assist the student in becoming involved in the educational process and assist in the learning activity once involved. In other words, educational services means provision of information, advising and educational counseling, registration systems, and instructional support. It is during these services that the human factor of the educational process is most evident.

Patricia Cross has indicated that adults frequently show a desire to have control over their learning environment and process. This does not mean, however, that they wish to work in isolation from human interaction.[2] The person who is studying independently may have cut the time and space relationships[3] that characterize most educational systems, but they do not cut the opportunity or need to interact with an advisor, counselor and instructor.

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[1] Self-directed learning projects is a concept developed and researched by Dr. Alan Tough of the Ontario Institute for Studies in Education, Toronto, Ontario, Canada.

[2] Cross, Patricia. Adults as Learners. San Francisco: Jossey-Bass Inc. 1981.

[3] A phrase and concept created by Charles A. Wedemeyer, Emeritus Professor of Extension Education, University of Wisconsin.

In the year 2001, the need to have educational services will not be diminished. It is very likely that Distance Education will be utilizing the emerging technologies such as:

- Teleconferencing
- Computer Assisted Instruction
- Computer Managed Instruction
- [Video] Discs
- Cable, including two-way
- Satellites
- Home Video Systems
- Minicam
- Radio (reemerging)
- Audio Tapes
- Audio Cassettes and Slides
- 1" and ½" [Video] formats for broadcast and on-site[4]

These technologies cannot be touted as the answer to distance education in and of themselves. They can, and must, be used now and in 2001 as the means by which the student and the educational institution interact. In other words, these technologies will enhance and increase the human interaction so necessary for successful learning.

Educational Services is a keystone. As in an arch, if the keystone is not properly designed, hewed, and placed, the arch will collapse, so will the quality and quantity of education suffer if educational services is not attended to with care and dedication.

David F. Mercer
Penn State University

[4]Gross, Ronald. Future Directions For Open Learning. Washington DC: National Institute of Education. 1979.

Mini Brief 2

Education Services: The Vital Link

This essay will focus in on what can be considered the "vital link" in the chain of educational process. This vital link is the communication that takes place between the student and instructor.

Student learning is the ultimate goal of any educational system, be it for institutional betterment, societal change, or individual improvement. Students can learn totally on their own, that is, without contact with an instructor. For the educational institution and the student to validate that appropriate learning has taken place, however, an interaction between the two is an absolute necessity.

In distance education, there is a requirement that is of concern to both the student and the educational institution. Because distance education cuts time and space requirements, it also demands more effort and motivation on the part of the student. Motivation is this concern, and the interactive communication plays an extremely important part in maintaining and enhancing the motivation of the student.

"All must recognize that learning can only be done by the student ... and that the teacher's task is to assist the [student] in the process!"[1] There are two primary phases in the distance education process. The first is the preparation and provision of well-prepared and appropriate, quality educational materials.[2] The second phase is the interaction that takes place between the student and instructor.[3] If one thinks logically about this process, they must realize that this two-step process results in a rather sharp break in the learning cycle.[4]

Again, we must recognize that the only possible way to minimize the disruption of learning created by this two-step process, is to maximize the quality and quantity of interaction between the student and instructor.

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[1] Childs, Gayle B. "Problesm of Teaching by Correspondence Study" in Report of the Conference on Newer Media in Correspondence Study. Austin, TX: The University of Texas, Division of Extension. 1960.

[2] ibid

[3] ibid

[4] ibid

Mini Brief 2

Historically, distance education has relied very heavily on written interaction. In 2001, the options available for interaction will be extensive. The newer media now being developed will offer visual, audio, and print options with one- and two-way capabilities. These media are not ends in themselves, but merely "ways" to enhance the interaction between student and instructor.

The endless chain called distance education contains many links. There is no more vital link than that grounded in human communication, the interaction between the student and instructor.

David F. Mercer
Penn State University

Mini Brief 3

Distance Education: Some Random Thoughts

I venture ... to make two statements; one an assertion based on large experience, the other a prediction based on strong conviction:

1. The student who has prepared a certain number of lessons in the correspondence school knows more of the subject treated in those lessons than the student who has covered the same ground in the classroom.
2. The day is coming when the work done by correspondence will be greater in amount than that done in the classrooms of our academies and colleges; when the students who shall recite by correspondence will far outnumber those who make oral recitations.[1]

The statement above was written in the mid-1890s by a preeminent educator, the intellectual founder of the University of Chicago, William Rainey Harper. President Harper was instrumental in moving correspondence education out of its infancy and changing it from a curiosity into a legitimate educational enterprise.

Unfortunately, President Harper was not gifted with the vision of the educational developments in the United States that we now have through hindsight.

He could not have foreseen the explosive growth of educational institutions and systems that provided mass education to everyone at convenient locations. His second prediction has not come true! His first is as true today as it was there in his correspondence department at the University of Chicago.

We can ask, will his second prediction ever come true? The only sound answer has to be no! No, from the standpoint that we have, since President Harper's day, learned something about the methodology of distance education and the learning process involved.

Even the staunchest advocate of distance education has to admit that the method simply is not appropriate for everyone, for every educational opportunity, or for every subject matter. We can say with some assurance, however, that greater numbers of students could become involved with distance education in mind, and additional subject areas taught through this methodology.

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[1] American Ideas About Adult Education, 1710-1951, C. Hartley Gratten, ed., Classics in Education, No. 2. New York: Bureau of Publications, Teachers College, Columbia University, 1959.

Mini-Brief 3

Even though not all educational decision-makers are seriously looking at alternative educational delivery systems, enough are, so that there is a movement in the wind in favor of distance education. It is up to those currently involved in distance education to carefully:

- maintain quality programs,
- make themselves known to decision-makers,
- involve existing and potential student clientele as a constituency,
- not promise more than the system can deliver,
- recognize that distance education is not the cure-all.

Possibly, if these are adopted, then we can live up to the spirit of President Harper's thoughts, if not the letter. The year 2001 can be an important era for distance education, as an important co-delivery system. Wise leadership, research and the appropriate use of the newer media may help this come about.

David F. Mercer
Penn State University

MINI BRIEFS

of

FRANK W. NORWOOD

Frank Norwood has over two decades of experience in education and education technology. For over 10 years, he has served as the Executive Director of the Joint Council on Educational Telecommunications. He is one of America's leading authorities on educational television and audio visual technology. He has spoken before NHSC audiences on many of the ideas covered in his mini briefs.

* "Educational Services: Humanizing Learning with Gadgets"
* "The Techno-Groupies -- God Save Us From Our Friends"
* "Find a Need and Fill It"

Mini-Brief 1 Frank W. Norwood

EDUCATIONAL SERVICES: HUMANIZING LEARNING WITH GADGETS

With the image of Mark Hopkins on one end of a log and the student on the other as education's ideal, it has been common the perceive technology as an an intrusion between teacher and student. ("Technology will dehumanize education! Did you students up in the balcony get that?") But education is seldom a one-on-one affair.

The first great educational technology increased the ability of students to learn at a distance from a variety of teachers from whom they were separated by space or time. The book is a liberating, rather than a dehumanizing, device.

The newer technologies can be used to build bridges, not barriers, between the teacher and the learner. Audio cassettes are already being used to present information and give instruction and to provide individual criticsm in an approximation for the distant learner of the traditional faculty office hour.

The use of 800 telephone numbers can serve the same purpose, and could be used to establish conference calls for class discussion, with or without a procter.

Perhaps, if and when the micro-computer becomes a common

household device, it will be a new means for communication between teacher and learner, permitting "on-line" review and revision of student essays. But right now computers are being used to analyze students' work, prescribe remediation, and generate--selecting from a store of paragraphs--"individualized" letters settimg forth appropriate next steps in the learning process.

Video cassettes, cable TV programs, and video discs can add another dimension, not only showing processes better that they can be described in print, but revealing the personality of the teacher. John Henry Cardinal Newman wrote:

"The general principles of any study you may learn by books at home; but the detail, the colour, the tone, the air, the life which makes it live in us, you must catch all these from those in whom it already lives."

For the distant learner, only technology can add that vital ingredient.

Mini-Brief 2 Frank W. Norwood

THE TECHNO-GROUPIES--GOD SAVE US FROM OUR FRIENDS

Most who have labored to promote the appropriate use of appropriate technology in education would agree that the greatest problems arise, not from stodgy conservatives like the mythical professor quoted in Mini-Brief 1, but from enthusiasts for technology who are long on fervor and short on understanding. The current group of zealots proclaim the coming of the home computer and the i eractive video disc.

The place to watch is not the laboratory, but the marketplace--specifically, the consumer market. Most educational technology in use is affordable only because the educational market is a subset of the consumer market. The carrousel slide projector provides an example. In video tape recorders, each of the early non-broadcast formats was aimed at the home market, including the U-Matic 1" system from Sony which failed at that goal, but found viability as a tool for business and education. But contrast its price with the consumer-successful 1/2" VHS and Beta machines.

The jury is still out on video discs. Contrasting philosophies a being tested in the marketplace. The laser disc faction stresses special features, stop-motion, the ability to find specific frames,

etc.; RCA, with its incompatible CED system, is betting that what the public wants is a low-cost device which can play back movies.

The most talked-about educational applications embrace the video disc's potential for interactivity with the learner, something only possible with the top-of-the line laser machines, and for sophisticated applications the player has to be combined with a microcomputer.

Suppose RCA is right? The sophisticated technology will still be available. . .but not affordable.

Twenty years ago the techno-groupies were selling programmed texts and language labs. Fifteen years ago, their pet was EVR--Electronic Video Recording--a playback-only device which one cynic called "8mm film in drag." Doubters were reminded that this "tool that would revolutionize education" had sprung from the fertile brain of Dr. Peter Goldmark, the genius who gave us the long-playing record. CBS was investing millions of dollars, and surely CBS wouldn't do that if they didn't think they had a winner.

More than $50-million later CBS pulled the plug. They thought they had a winner but they were wrong.

In educational technology, as in theology, those who have the most unquestioning faith have the shallowest understanding.

Mini-Brief 3 Frank W. Norwood

"FIND A NEED AND FILL IT"

That was Henry J. Kaiser's motto, and by and large it served him well. There is an emerging educational need which, thus far, has not been well addressed by conventional schools and colleges, nor, to my knowledge, by the home study community.

In a recent Wall Street Journal article, Peter Drucker opined t t the growth aera in education is in providing education to already highly educated adults. The need for professional continuing education for recertification and relicensure, for people business who need to maintain and up-grade their skills, for those planning or undergoing career change, for women re-entering the job market.

The spate of two- and three-day seminars held in hotels, the growth of newsletters on every conceivable subject (yes, there is a Newsletter on Newsletters) evidence a widespread need for information which is specific, timely (last year's lecture notes and textbook can't explain the ins and outs of this year's Federal regulations, or tax structure), and trimed of all fat.

Increasingly, industry itself is taking up the task, sometimes because the need is to train employees to do it "our way" but often

because there is no other way to fill the gap.

If the members of the National Home Study Council really fear rising costs, shrinking enrollments, and increasing competition from public and private colleges, they could do worse that to give this area of need a closer examination.

MINI BRIEFS

of

ROBERT CHESTER ROGERS

Robert Rogers is the Coordinator, Independent Postsecondary Schools, State Board of Higher Education for Maryland. He has over 8 years of experience as a state administrator. He has served as Budget and Program Analyst for the Maryland General Assembly.

* "Educational Services in 2001: High Technology will Increase Human Contact in Distance Education"

* "Mini-Centers: All the Rage in 2001"

* "Distance Education will have an Increasingly Competitive Edge with Colleges and Universities in 2001"

Robert Chester Rogers
Essay One

EDUCATIONAL SERVICES IN 2001: High Technology Will Increase Human Contact in Distance Education

For the purpose of this essay, educational services are defined as an educational establishment's interaction with students in distance education.

High technology is commonly characterized as a dehumanizing phenomenon that reduces human interaction. However, high technology in distance education will mean more, rather than less, human contact between the distant student and the educational establishment. In 2001, written program instruction and written student assignments will remain an integral part of the distant student's program of study. In addition, telecommunications between the distant student and educational establishment will probably remain at 1981 levels. However, many educational establishments will integrate written instruction and assignments and supplement telecommunications with auto-visual delivery systems to increase human contact. In 2001, auto-visual playable devices will be an important part of a distant education program and these playable devices will be sent to the distant student to use in conjunction with the written program instruction and assignments. The audio-visual systems, which will be both self contained playable devices and devices that would adapt to the distant student's home television set or entertainment system, will significantly increase both the student's achievement in the program of study and the student's enjoyment in taking the program.

Because of high costs, auto-visual systems in the distant student's home, that have interacting capability with the educational establishment, will probably not be in general use by 2001. (For this essay, audio-visual systems with interacting capability are defined as systems with which the student and the educational establishment can directly view, communicate and respond to one another.) However, educational establishments will develop mini-centers with this capability and assign these centers with major responsibilities for student services. Mini-centers will be both mobile and at fixed locations and they will represent educational establishments for admissions, counseling, placement and support instruction functions in various regions of the country.

Robert Chester Rogers
Essay Two

MINI-CENTERS: All the "Rage" in 2001

High technology will make it both possible and desirable for many educational establishments to open mini-centers throughout the country in 2001. Mini-centers will be relatively small area or regional locations of an educational establishment. The mini-centers will have a very small staff who will have direct access to the headquarters of an educational establishment through telecommunications and audio-visual systems with interacting capability between the center and the headquarters. Because of the variation in the numbers of distant students to be served in a given area or region, mini-centers will be both mobile and at fixed locations.

The primary purpose of the mini-centers will be to increase direct interaction between the distant education student and the educational establishment. Student recruitment, testing, admissions counseling and fee collections will be handled by the mini-center. Once enrolled, the mini-center will provide a variety of educational services for the distant student during the program of study. For example, relatively expensive audio-visual playable devises, which many students will have in 2001 to supplement a program of study, will be disbursed and returned at the mini-centers. Mini-centers will also be used as student testing locations for major examinations in a program of study. In addition, mini-centers will also be used to closely monitor the distant student's progress. Through periodic reports from the headquarters of the educational establishment, the staff of the mini-center will evaluate the progress of students in their area or region. If a student's performance is marginal or unsatisfactory, the student will be asked to visit the mini-center to receive counseling and tutorial help via the mini-center's telecommunications and audio-visual systems equipment. Once the distant student has completed the program of study, the staff of the mini-center will also assist in student placement.

In 2001, educational services will be enhanced by high technology because of the increased interaction between the student and the educational establishment.

Robert Chester Rogers
Essay Three

DISTANCE EDUCATION WILL HAVE AN INCREASINGLY COMPETITIVE EDGE WITH COLLEGES AND UNIVERSITIES IN 2001

High residence education costs at colleges and universities and the use of high technology by distance educational establishments will give distance education an increasingly competative edge in 2001.

In 2001, general inflation will cause significant and continual increases in operating costs for residence education at colleges and universities. Even in the face of pressures to economize, many public and private colleges and universities in the country will continue to be over-built, over-staffed and under-populated because the stabilization in birth rates beginning in the late 1970's and early 1980's. Stabilized enrollments and continuely increasing operating institutional costs will cause spiraling tuition and fees for the resident student in 2001. Also, because of a strong tradition, many colleges and universities will still be teaching on a semester basis and it will take two (2) to four (4) years for a student to complete a program of study. Many prospective resident students, and their families, who will also be faced with the effects of inflation will become increasingly unable to afford a two (2) year or four (4) year educational commitment in 2001 where the student will not be able to be employed on a full-time basis. Many of these students will look to distance education as an alternative.

In 2001, many distance education establishments will have already invested substantial resources and will have developed a comprehensive range of educational programs to be delivered to the distant student through high technology systems. These programs will be competitively priced when compared with college and university residence training programs because of the lower operating costs of distant educational establishments. In 2001, high technology will allow distance educational establishment to offer personalized instruction and student services that will be comparable to what students receive in residence training programs. In addition, distant students will be able, as they always have, to study at their own pace and to have full-time jobs while they are pursuing a program of study. These attributes of distance education will give it an increasingly competitive edge over colleges and universities in 2001.

MINI BRIEFS

of

KENNETH E. YOUNG

Dr. Young is the Executive Director of the National University Continuing Education Association, Washington, D.C. He served as the first President of the Council on Postsecondary Accreditation, the nongovernmental coordinating body of the nation's accrediting agencies. He is a former college president and also served as Vice President of the American College Testing Service (ACT) of Iowa City.

* "Who will Enroll in Distant Education in 2001?"
* "Applications of Distant Education in 2001"
* "Quality Assurance of Distant Education in 2001"

Kenneth Young

Mini-Brief 1

Who Will Enroll in Distant Education in 2001?

The dramatic answer to the question posed in the title is -- everybody and nobody, depending upon how one uses the word "enroll." As more and more individuals continue their education through most of their lives, as social enterprises of all kinds increasingly sponsor learning opportunities related to their purposes, and as new technology makes possible a greater variety of learning modes, it no longer will be possible to think meaningfully of a certain class of people called "students" who "enroll" in a certain kind of prefabricated learning called "courses." That concept will become submerged (or, if you will, enlarged) as part of a much more complex living--learning--working--recreating social pattern.

Most home study operations likely will be in the "wholesale" rather than the "retail" business, designing and delivering self-study modules for other institutions and organizations. The recruiting of students will be replaced by sales presentations to government, business and industry, and professional associations. "Enrollment" will take on an entirely new meaning.

Kenneth Young

Mini-Brief 2

Applications of Distant Education in 2001

No matter where we look, we see evidence of one overriding trend -- a movement away from separateness and toward interconnectedness. Examples of this include:

- Powerful forces (most particularly, atomic weaponry, satellites, worldwide economic developments, and the presistent search for a better life) are diminishing our capacity to maintain, or even to nourish the concept of national independence. The steady flow of illegal immigrants across the the Mexican-American border and the growing "Chicanoization" of the southwest is but one example of this.)

- Technical developments rapidly are eliminating meaningful distinctions between the postal service, the telephone company, electronic media, computers, and printing and duplicating equipment.

- Social changes are blurring the role differences of student, worker, and retiree (not to mention head of household/housewife, professional/nonprofessional, etc.).

- Functional elaborations are producing increasing overlapping in the services provided by various social institutions -- business and industry; labor unions and professional associations; educational enterprises, libraries, and museums; and government.

The implications of this manifold trend for distant education are many. By the year 2001, or before, distant education will be transnational, it will utilize a variety of delivery modes, it will serve many kinds of different people in different phases of life, and it will be utilized by all major enterprises in our society --probably in collaborative arrangments. For example, colleges and universities will work cooperatively with professional asscciations in conducting research on proficiencies and designing educational experiences that would develop those proficiencies. (Pennsylvania State University is doing that right now). For-profit home study schools will contract extensively with business and industry to provide in-service training. (The Truck Marketing Institute already has such an arrangement with General Motors and Ford). Perhaps the greatest potential for cooperative activity is with government -- federal, state, and local. The federal government spends billions of dollars for education, training, and development. Much of it now is done unilaterally, and could be done as well or better by nongovernmental organizations under contract.

Kenneth Young

Mini-Brief 3

Quality Assurance of Distant Education in 2001

As teaching-learning processes become ever more diversified, the trend in accreditation away from a primary focus on resources and process toward an emphasis on educational outcomes will be accentuated. There will be a greater acceptance of the notion that persons can learn in many ways and in many settings and a corresponding demand that learning be described and evaluated.

This means that virtually all learning modules will include an evaluational component. It also suggests that colleges and universities probably will become centers where experts will help others to design learning experiences, including the identification and assessment of learning outcomes. They also likely will serve as the places where students would be tested -- in person or by television and computers.

Accrediting agencies increasingly will become resource bodies, providing guidelines as to good practices, consulting services, and grievance machinery, as well as serving to validate educational outcomes.

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VII. Ballot Forms Used in Voting on Final Prediction

1. Ballot Number 1

2. Final Ballot

⊕⊕⊕⊕⊕⊕ *distant education in*

2001⊕⊕⊕⊕⊕⊕

√ Ballot #1

Here is your ballot form number 1. We ask that you record your "vote" according to what you think the distant education (D/E) system will look like in the year 2001.

Directions: This ballot consists of four parts. Each part includes a series of consecutively lettered statements. Please record your responses on the yellow ballot sheets.

1) Read each statement, then indicate your degree of agreement with the statement: (5) if you strongly agree, (1) if you strongly disagree.

2) When you have rated all of the statements in each part, rank them in their order of importance. Use (1) for the most important, (2) for the next important, etc. Be sure that every statement is ranked.

3) If you would like to include additional statements, please write them in the space provided on the yellow ballot sheets.

4) When you have completed the entire ballot, please return the yellow ballot sheets in the pre-addressed envelope provided.

Thank you!

√ *It is urgent that all surveys be returned by November 11th to:*

Michael P. Lambert
National Home Study Council
1601 18th Street, N.W.
Washington, D.C. 20009

DESCRIPTIVE STATEMENTS

(Refer to yellow ballot sheets to record your response to each statement.)

PART I Enrollment Techniques and Demographic Profiles

By the year 2001, the following statements will best describe the enrollment and demographic aspects of D/E systems in America:

A. D/E enrollment will be part of a more complex living-learning-working-recreating social pattern.

B. The adult population (ages 18 to 70 yrs.) will be the source for D/E enrollments.

C. Persons aged 46 to 60 yrs. will be the primary source for D/E enrollments.

D. Persons aged 46 to 60 yrs. enrolling in D/E will be seeking training for new careers.

E. Mid-life career change will be accepted as a social norm.

F. Single parents and "empty nesters" will constitute a large population favorably disposed to D/E.

G. Medical science will further extend life expectancy; there will be a greater proportion of older people in our society.

H. Retired persons will have more money to spend on leisure activities.

I. The typical American will want to master two or more languages to be able to effectively communicate with people in other nations via telecommunications systems.

J. D/E "mini-lessons" related to leisure activities, e.g., sports, art, will be popular and reach a large market.

K. Workers will work fewer hours of the week and have more leisure time for activities such as D/E.

L. Special training programs for minorities will educate larger numbers for jobs requiring decision-making skills.

M. Home care for the elderly will replace institutional care, requiring training on the part of family members.

N. Retail store owners will offer training instructions on their products via D/E to avoid the cost of hiring sales personnel.

PART I, cont.

O. Individuals will typically enroll in D/E programs via home electronic communication centers.

P. D/E enrollments will be processed through regional counseling centers that represent the various schools and programs offered.

PART II Educational Materials and Student Access

The following statements best describe D/E course materials and student access to them in 2001:

A. Every home will have some form of microprocessor or computer for educational purposes.

B. Direct broadcast satellites will make D/E accessible to students everywhere.

C. More sophisticated technology, e.g., digital video, holographs, will personalize D/E instruction.

D. Home study educators will "rediscover" the media of radio and telephone conference calls as means for direct interaction with students.

E. Educational materials will be designed for the optimal interaction between tutor and students, including such features as interactive computer programs, teleconferencing, group contact in central location, etc.

F. Educational materials will be designed to be marketed wholesale, as well as retail.

G. Courses will be structured to include cognitive and attitudinal learning objectives.

H. Greater emphasis will be given to the testing and validation of educational materials before they are marketed.

I. D/E course materials will follow a modular design to facilitate the awarding of academic credit.

J. A central clearinghouse will distribute standardized D/E materials.

K. The design and development of D/E courses will be the cooperative effort of several kinds of specialists.

PART II, cont.

L. D/E materials will be produced by "course development teams" comprised of academicians, technical writers, and production specialists.

M. Educational brokering will make more people aware of courses offered via D/E.

N. If the national economy stays the same, the costs of developing D/E courses will be amortized over a longer period of time by extending the "shelf life" of courses (not updating them as often.)

O. An average 30-lesson course, with printed and audio or visual components, will cost about $ 750,000 to develop and market.

PART III Educational Services

The educational services to a student enrolled in D/E will be best characterized by the following:

A. Educational services will continue to mean service to or in support of the educational process.

B. Adult students will want to have control over their learning environment and process.

C. Adult students will want to interact with advisors, counselors or instructors.

D. The electronic technologies will be the means of interaction between students and educational institutions.

E. Communication will be the vital link between the student and the instructor.

F. Interactive communication will be the primary means of validating learning.

G. Interactive communication will play an extremely important role in maintaining and enhancing motivation.

H. D/E will be important as a co-delivery system.

PART III, cont.

I. Educational services will be tailored for either individual students or organizations sponsoring D/E programs for their employees or members.

J. The staunchest advocates of D/E will admit that the method is not appropriate for all students.

K. Printed materials and lesson assignments will remain an integral part of D/E courses.

L. Audio-visual devices will be sent to D/E students to be used in conjunction with printed course materials.

M. Due to high costs, audio-visual systems that allow interaction between students and educational institutions will not be available in the home.

N. Audio-visual devices with interactive capability will be available in mobile and fixed "mini-centers" that represent educational institutions.

O. The "mini-centers" will provide counseling services and instructional delivery support on a regional basis.

P. Through the available technology, D/E will have the competitive edge over traditional delivery systems.

Q. As the costs of attending resident schools climb higher because of inflation, many will choose D/E as a less expensive alternative.

R. Many educational institutions will have invested substantially in D/E to develop a comprehensive range of D/E courses.

S. Technology will allow D/E institutions to offer personalized instruction comparable to resident training.

T. D/E students will use standardized, accredited "knowledge kits" delivered via standardized, accredited delivery systems.

U. The standardization of "knowledge kits" and delivery systems will allow any school to offer D/E.

PART III, cont.

V. The standardization of "knowledge kits" and delivery systems will result in "Edu-shops", neighborhood centers that will offer the full range of courses and delivery systems.

W. The standardized "knowledge kit" will include four essential parts: the interactive content or student's package; the teacher guide, instructions and grading materials or preceptor's package; the independent tester's and evaluator's guide or qualifier's package; and the counseling and promotional materials related to student services or school's package.

X. D/E delivery systems will offer the choice of lecture or interactive modes, enabling students to choose the system best-suited to them.

Y. The "knowledge kit" will be successfully marketed because the public will have recognized the need for standardized delivery systems and course materials.

Z. The majority of D/E students will be served by the "Edu-shop": as McDonald's standardized the service of fast foods in the 1970's, "Edu-shops" will have standardized educational services in 2001.

PART IV Application of Distant Education in 2001

The following statements suggest what D/E will be used for and best noted for in 2001:

A. All educational programs will have a D/E component.

B. All academic and vocational subjects will be available by D/E.

C. All subjects will be taught to prepare students for competency-based exams.

D. Professionals will be able to earn credentials in their fields via D/E.

E. Providers of D/E will provide materials and services wholesale to companies, professional organizations, and schools.

F. Providers of D/E will be accountable to consumers by providing informatic i on the outcomes of their educational services.

PART IV, cont.

G. A nationwide data bank will exist to provide information on D/E--the programs available and who offers them.

H. There will be an emphasis on academic degrees rather than competency-based education.

I. State boards of higher education will give D/E providers the authority to grant degrees.

J. Public and private colleges, universities and vocational schools will recognize the degrees or credits earned via D/E.

K. Public funds will be available for the unskilled who enroll in D/E training programs to prepare for entry-level jobs.

L. Public funds will not be available for students enrolling in D/E programs at the postsecondary level, for professional development or self-improvement.

M. Employers will play a greater role in financing D/E activities for their employees.

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⊕⊕⊕⊕⊕⊕ distant education in

final ballot 2001 ⊕⊕⊕⊕⊕⊕

Part I Enrollment Techniques & Demographic Profiles

if you agree this statement
reasonably predicts D/E in 2001

_____ D/E enrollment will be part of a more complex living-learning-working-recreating social pattern.

_____ The adult population (ages 18 to 70 yrs.) will be the prime source for D/E enrollments.

_____ Mid-life career changes will be accepted as a social norm.

_____ Single parents and "empty nesters" will constitute a large population favorably disposed to D/E.

_____ Medical science will further extend life expectancy; there will be a greater proportion of older people in our society who are candidates for D/E.

_____ D/E "mini-lessons" related to leisure activities, e.g., sports, arts, will be popular and reach a large market.

_____ Home care for the elderly will replace institutional care, requiring D/E training on the part of family members.

_____ During the next twenty years, established educational institutions offering D/E courses will lose their individualites and become part of a single national system or conglomerate.

_____ U.S. D/E will enroll more students from other countries than from America.

_____ Global education will be the focus of D/E; e.g., D/E will transcend political boundaries.

_____ The enrollment contract will continue to be the means that students will use to commit themselves to D/E courses.

_____ The largest proportion of the D/E student population will consist of those people who can be convinced (sold the idea) that they have the potential to better themselves through the means of D/E -- financially or otherwise.

Part II Educational Materials & Student Access

_____ Direct broadcast satellites will be heavily used in D/E and will make D/E accessible to students everywhere.

_____ Home study educators will "rediscover" the media of radio and telephone conference calls as means for direct interaction with students.

_____ Educational materials will be designed to be marketed wholesale, as well as retail.

_____ Courses will be structured to include cognitive and attitudinal learning objectives.

_____ Greater emphasis will be given to the testing and validation of educational materials before they are marketed.

_____ D/E course materials will follow a modular design to facilitate the awarding of academic credit.

_____ The design and development of D/E courses will be the cooperative effort of several kinds of specialists.

_____ D/E materials will be produced by "course development teams" comprised of academicians, technical writers, and production specialists.

_____ Educational brokering will make more people aware of courses offered via D/E.

_____ The standarized "knowledge kit" will be a textbook or notes based on a textbook, enhanced by supplementary material.

_____ D/E "knowledge kits" will contain two types of textbooks: 1) correspondence course textbooks and 2) reference works such as dictionaries, reference manuals, etc.

_____ Printed correspondence course text materials will be the key component in the D/E education package of 2001.

_____ Future growth of D/E should involve extensive use of fixed-location educational media (computers, A/V equipment, telephone links, etc.) which will limit the concept of flexibility of learning, when and where the student elects.

_____ Printed materials and lessons assignments will remain an integral part of D/E courses.

_____ Audio-visual devices will be sent to D/E students to be used in conjunction with printed course materials.

Part III Educational Services

_____ Educational services in D/E will continue to mean service to or in support of the educational process.

_____ Adult students in 2001 will demand control over their learning environment and process.

_____ Adult students will want to interact with advisors, counselors or instructors on a "real time" (now, when they call) basis.

_____ Communication will be the vital link between the student and the instructor.

_____ D/E will be important as a co-delivery system to traditional, resident systems.

_____ Educational services will be tailored for either individual students or organizations sponsoring D/E programs for their employees or members.

_____ The staunchest advocates of D/E will admit that the method is not appropriate for all students.

_____ Through the available technology, D/E will have the competitive edge over traditional delivery systems in enrolling more students.

_____ As the costs of attending resident schools climb higher because of inflation, many will choose D/E as a less expensive alternative.

Part IV Application of Distant Education in 2001

_____ Professionals will be able to earn credentials in their fields via D/E.

_____ Providers of D/E will provide materials and services wholesale to companies, professional organizations, and schools.

_____ Providers of D/E will be accountable to consumers by providing information on the outcomes of their educational services.

_____ A nationwide data bank will exist to provide information on D/E -- the programs available and who offers them.

_____ Public and private colleges, universities and vocational schools will routinely recognize the degrees or credits earned via D/E.

_____ Public funds will be available for the unskilled who enroll in D/E training programs to prepare for entry-level jobs.

Part IV Application of Distant Education in 2001, cont'd.

_____ Employers will play a greater role in financing D/E activities for their employees.

_____ Textbook correspondence courses will be available from libraries, bookshelves, or as components in D/E.

_____ The federal government will be totally out of the education "business."

_____
NAME

_____
DATE

Please return to:

National Home Study Council
1601 18th Street, N.W.
Washington, D.C. 20009

Attn: Michael P. Lambert